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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/707,057	11/18/2003	Gary A. Reichle	11564.0070.NPUS01	1056
26720	7590	04/07/2005	EXAMINER	
LOCKE LIDDELL & SAPP LLP ATTN. DOCKETING 600 TRAVIS #3400 HOUSTON, TX 77002			PATEL, RAJNIKANT B	
			ART UNIT	PAPER NUMBER
			2838	

DATE MAILED: 04/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

H-A

**Office Action Summary**

Application No.

10/707,057

Applicant(s)

REICHLE ET AL.

Examiner

Rajnikant B. Patel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 November 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maynard et al. (U.S. patent # 3,955,122) in combination with Casey et al. (U.S. Patent # 6,407,901).

Maynard et al. disclose the claimed invention a heat sink (figure 1-10). However Maynard et al. does not disclose the utilization of the technique for a first switch module connected to heat sink, the first switch module having first and second switch device and a second switch module connected to heat sink, the second switch module having first and second switch device each switch device having gate terminal; a first power source input terminal connected to a cathode terminal of the second switching device of the first switching device of the second switch module; an output terminal connected to an anode terminal of the second switching device of the first switch module and a cathode terminal of the first switching device of the second switch module wherein the gate terminals of the switching device are controllable that the first switch module conduct during a first portion of the power duty cycle and the second switch module conducts during a second portion of the duty cycle. Casey et al. teaches the utilization of the similar technique for a first switch module (figure 2, item 40) connected to heat

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sink, the first switch module having first and second switch device (figure 2, item 60) and a second switch module (figure 2, item 41) connected to heat sink, the second switch module having first and second switch device (figure 2, item 80) each switch device having gate terminal (figure 2, item 70 and 90); a first power source input terminal (figure 2, item 24) connected to a cathode terminal of the second switching device of the first switching device of the second switch module; an output terminal connected to an anode terminal of the second switching device of the first switch module and a cathode terminal of the first switching device of the second switch module wherein the gate terminals of the switching device are controllable that the first switch module conduct during a first portion of the power duty cycle and the second switch module conducts during a second portion of the duty cycle. It would have been obvious one having an ordinary skill in the art at the time the invention made to modify Maynard et al.'s heat sink by utilizing the technique taught by Casey et al. for the purpose of providing line protection circuit.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rajnikant B. Patel whose telephone number is 571-272-2082. The examiner can normally be reached on 6.30-5.00; m-f.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry can be reached on 571-272-2084. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Rajnikant B Patel  
Primary Examiner  
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